QC ABSTRACT

NAME OF WORK: Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Precast (100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
7	Precast (250mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
8	Brick	Compressive Strength	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		EFFLORESCENCE	One Test		1	1
		DIMENSIONS AND TOLERANCES	One Test		1	1

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9	RCC(M20)	Compressive Strength(7days and 28days)	5 set /51-100 cum	90.43	10	10
10	Cement Concrete Pavemet (M30)	Compressive Strength(7days and 28days)	4 set /31-50 cum	41.51	8	8
11	RCC(M25)	Compressive Strength(7days and 28days)	1 set /1-5 cum	6.58	2	2
12	RCC(M20)	Compressive Strength(7days and 28days)	3 set /16-30 cum	25.14	6	6
13	Mortar Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		Compacted Bulk Density	One Test		1	1
		Loose Bulk Density	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
14	A.E.E Plaster Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2021-01-06-14 **Date: 31-01-20**

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 28-01-20

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6

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Date of test : 29-01-20

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.87	_
2	Finess by Air permeablity method (m^2/kg,Min)	348.6	225m^2/kg, Min
3	Density (gm/cc)	3.12	_
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	135 minutes	Not less than 30 minutes
6	Final Setting time	245 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

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Authorized Signatory
Quality Manager

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2021-01-06-14 **Date: 31-01-20**

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 28-01-20

Sample Type : 40mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 28-01-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	215	215	1.4	98.6	90-100
3	20 mm	7455	7670	51.1	48.9	30-70
4	10 mm	4266	11936	79.6	20.4	10-35
5	4.75 mm	2844	14780	98.5	1.5	0-5
6	Pan	220	15000	100.0	0	—

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	CP-2021-01-06-14 Date: 30-01-20
Project Name	:	Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division
Agency	:	M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010
Customer Reference	:	BBMP/EE/YNK.D/W.O/153/2019-20
Date of Receipt	:	28-01-20
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - I,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	28-01-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	225	225	4.5	95.5	90-100
3	10 mm	2845	3070	61.4	38.6	25-55
4	4.75 mm	1745	4815	96.3	3.7	0-10
5	Pan	185	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2021-01-06-14** **Date: 30-01-20**

PHYSICAL PROPERTIES

SLno	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.1	
3	Specific Gravity	2.68	–
4	Bulk Density(Loose) (Kg/l)	1.43	–
5	Bulk Density(Compacted) (Kg/l)	1.49	–
6	Water Absorption(%)	0.23	–
7	Aggregate crushing Value(%)	22.9	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.7	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signature
Quality Manager

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TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2021-01-06-14 Date: 30-01-20

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	6.3	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

* The results obtained are satisfactory as per standard requirements.

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Authorized Signatory
Quality Manager

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TEST RESULTS OF STEEL

Lab ID : CP-2021-01-06-14 Date: 29-01-20

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 28-01-20

Sample Type : Sunvik

Reference to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.

Date of test: : 28-01-20

SLNo	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	Sunvik	Fe500	8	0.391	512	652	20.0%	Satisfactory	Satisfactory
2	Sunvik	Fe500	10	0.616	528	672	20.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.888	544	668	20.0%	Satisfactory	Satisfactory
4	Sunvik	Fe500	16	1.581	572	674	19.0%	Satisfactory	Satisfactory
5	Sunvik	Fe500	20	2.476	584	693	19.0%	Satisfactory	Satisfactory
6	Sunvik	Fe500	25	3.472	597	712	18.0%	Satisfactory	Satisfactory

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF PRECAST COVER SLAB

	:	CP-2021-01-06-14 **Date: 10-02-20**
Name	:	Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division
	:	M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010
ıer's Reference	:	BBMP/EE/YNK.D/W.O/153/2019-20
Receipt	:	05-02-20
: Type /Size	:	Precast Cover Slab (250mm)
ıce to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete
f test	:	05/02/2020

Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
	(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm^2)	(N/mm^2)	(N/mm^2)
Cover Slab-1	200.51	250.48	3.116	31570	230.9	7.3	6.8	8.5
Cover Slab-2	200.49	250.52	3.122	31564	232.3	7.4	6.8	8.6
Cover Slab-3	200.50	250.51	3.118	31567	231.5	7.3	6.8	8.5

he results obtained are satisfactory as per standard requirements.

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Lab ID : CP-2021-01-06-14 Date: 12-10-20

WATER ABSORPTION:

Sl.No.	Dry Weight	Wet Weight	Water Absorption(%)	Acceptablity as per IS 1077:1992, Clause 7.2
1	2.975	3.265	9.7	The water Absorption of bricks shall not be more than 20% by weight upto class 12.5 and 15% by weight for higher classes.
2	2.868	3.176	10.7	
3	2.906	3.196	10.0	
4	2.976	3.275	10.0	
5	2.875	3.218	11.9	
Average Water Absorption(%)			10.5	

EFFLORESCENCE:

Sl.No.	Length (mm)	Breadth (mm)	Area (mm^2)	Efflorescence	Acceptablity as per IS 1077:1992, Clause 7.3
1	229.18	108.98	24976	Slight	The efflorescence shall not be more than 'moderate" upto class 12.5 and "slight" for higer classes.
2	228.98	109.18	25000	Moderate	
3	228.18	108.39	24732	Slight	
4	230.19	107.98	24856	Moderate	
5	228.13	109.19	24910	Slight	

DIMENSIONS AND TOLERANCES

Sl.No.	Dimensions obtained for 20 bricks(mm)		Acceptability as per IS 1077:1992, Clause 6.2(b)
1	Length	4610	4520 to 4680 mm
2	Width	2185	2160 to 2240 mm
3	Height	1390	1360 to 1440 mm

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

ID	:	CP-2021-01-06-14
		Date: 03/03/2020
ect Name	:	Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division
ncy	:	M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010
tomer's Reference	:	BBMP/EE/YNK.D/W.O/153/2019-20
e of Receipt	:	06-02-20
tomer ID	:	Drain Bottom Slab Concrete
aple Type /Size	:	150X150X150 mm
aple grade/Age	:	M20 / 28 Days Compressive Strength
ference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
te of test	:	03/03/2020

l. o.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm²)	Average Compressive Strength (N/mm²)
1	Drain Bottom Slab Concrete	M20	04/02/2020	03/03/2020	150.09 X 149.58 X 150.65	22451	8.016	528.7	23.5	23.2
2	Drain Bottom Slab Concrete	M20	04/02/2020	03/03/2020	150.68 X 149.76 X 150.75	22566	8.492	516.5	22.9	
3	Drain Bottom Slab Concrete	M20	04/02/2020	03/03/2020	150.48 X 150.64 X 150.08	22668	8.797	525.0	23.2	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

ID : CP-2021-01-06-14

Date: 14/02/2020

ject Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

ncy : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

tomer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

te of Receipt : 10-02-20

stomer ID : Drain Side Wall Concrete

mple Type /Size : 150X150X150 mm

mple grade/Age : M20 / 7 Days Compressive Strength

ference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

te of test : 14/02/2020

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm²)	Average Compressive Strength (N/mm²)
1	Drain Side Wall Concrete	M20	07/02/2020	14/02/2020	151.54 X 149.16 X 151.52	22604	8.351	423.3	18.7	18.7
2	Drain Side Wall Concrete	M20	07/02/2020	14/02/2020	151.03 X 149.38 X 150.05	22561	8.427	417.7	18.5	
3	Drain Side Wall Concrete	M20	07/02/2020	14/02/2020	150.94 X 150.85 X 151.44	22769	8.258	428.0	18.8	

* The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

Date: 06/03/2020

ID	:	CP-2021-01-06-14
ject Name	:	Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division
ncy	:	M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010
stomer's Reference	:	BBMP/EE/YNK.D/W.O/153/2019-20
te of Receipt	:	10-02-20
stomer ID	:	Drain Side Wall Concrete
mple Type /Size	:	150X150X150 mm
mple grade/Age	:	M20 / 28 Days Compressive Strength
ference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
ate of test	:	06/03/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete	M20	07/02/2020	06/03/2020	150.96 X 149.20 X 150.39	22524	8.016	527.0	23.4	23.2
2	Drain Side Wall Concrete	M20	07/02/2020	06/03/2020	150.25 X 150.75 X 150.72	22650	8.492	501.6	22.1	
3	Drain Side Wall Concrete	M20	07/02/2020	06/03/2020	149.32 X 151.23 X 150.54	22583	8.797	541.4	24.0	

* The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

Lab ID : CP-2021-01-06-14

Date: 24/02/2020

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 19-02-20

Customer ID : Cement Concrete Pavement

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/02/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement	M30	17/02/2020	24/02/2020	150.09 X 150.36 X 151.56	22567	8.267	580.4	25.7	25.4
2	Cement Concrete Pavement	M30	17/02/2020	24/02/2020	149.56 X 150.53 X 151.04	22513	8.923	592.6	26.3	
3	Cement Concrete Pavement	M30	17/02/2020	24/02/2020	151.67 X 150.51 X 149.36	22828	8.541	550.4	24.1	

* The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

Date: 24/02/2020

b ID	:	CP-2021-01-06-14
oject Name	:	Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division
gency	:	M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010
ustomer's Reference	:	BBMP/EE/YNK.D/W.O/153/2019-20
ate of Receipt	:	19-02-20
ustomer ID	:	Cement Concrete Pavement
ample Type /Size	:	150X150X150 mm
ample grade/Age	:	M30 / 7 Days Compressive Strength
eference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
ate of test	:	24/02/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement	M30	17/02/2020	24/02/2020	150.99 X 149.12 X 151.74	22516	8.267	578.4	25.7	25.6
2	Cement Concrete Pavement	M30	17/02/2020	24/02/2020	151.85 X 150.43 X 151.40	22842	8.923	612.9	26.8	
3	Cement Concrete Pavement	M30	17/02/2020	24/02/2020	149.54 X 150.66 X 150.80	22529	8.541	547.3	24.3	

* The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

Date: 16/03/2020

Lab ID : CP-2021-01-06-14

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 19-02-20

Customer ID : Cement Concrete Pavement

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 16/03/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm²)	Average Compressive Strength (N/mm²)
1	Cement Concrete Pavement	M30	17/02/2020	16/03/2020	151.23 X 151.09 X 149.67	22848	8.668	767.9	33.6	33.0
2	Cement Concrete Pavement	M30	17/02/2020	16/03/2020	151.55 X 151.97 X 150.73	23032	8.364	740.4	32.1	
3	Cement Concrete Pavement	M30	17/02/2020	16/03/2020	150.91 X 149.94 X 151.21	22628	8.327	752.7	33.3	

*The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

Lab ID : CP-2021-01-06-14

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Date: 16/03/2020

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 19-02-20

Customer ID : Cement Concrete Pavement

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 16/03/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm²)	Average Compressive Strength (N/mm²)
1	Cement Concrete Pavement	M30	17/02/2020	16/03/2020	149.84 X 151.66 X 150.52	22725	8.668	764.0	33.6	33.2
2	Cement Concrete Pavement	M30	17/02/2020	16/03/2020	150.52 X 150.56 X 151.00	22662	8.364	736.2	32.5	
3	Cement Concrete Pavement	M30	17/02/2020	16/03/2020	150.77 X 151.46 X 149.72	22836	8.327	761.5	33.3	

*The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

: CP-2021-01-06-14

Date: 10/10/2020

Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

: M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

ner's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

f Receipt : 05-10-20

mer ID : Footing Concrete

le Type /Size : 150X150X150 mm

le grade/Age : M25 / 7 Days Compressive Strength

rence to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

of test : 10/10/2020

	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm²)	Average Compressive Strength (N/mm²)
1	Footing Concrete	M25	03/10/2020	10/10/2020	149.94 X 149.48 X 150.85	22413	8.774	533.5	23.8	23.0
2	Footing Concrete	M25	03/10/2020	10/10/2020	149.81 X 149.51 X 151.37	22399	8.464	510.6	22.8	
3	Footing Concrete	M25	03/10/2020	10/10/2020	151.94 X 150.17 X 151.15	22817	8.717	511.6	22.4	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

Lab ID : CP-2021-01-06-14

Date: 05/11/2020

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 10-10-20

Customer ID : Pedestal Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/11/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Pedestal Concrete	M20	08/10/2020	05/11/2020	149.90 X 149.13 X 149.63	22355	8.016	522.4	23.4	23.3
2	Pedestal Concrete	M20	08/10/2020	05/11/2020	151.28 X 150.96 X 149.22	22838	8.492	516.6	22.6	
3	Pedestal Concrete	M20	08/10/2020	05/11/2020	149.81 X 149.57 X 150.57	22407	8.797	535.3	23.9	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

Lab ID : CP-2021-01-06-14

Date: 17/11/2020

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 21-10-20

Customer ID : Plinth Beam Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 16/11/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Plinth Beam Concrete	M20	19/10/2020	16/11/2020	150.13 X 149.55 X 151.75	22452	8.016	522.0	23.2	23.3
2	Plinth Beam Concrete	M20	19/10/2020	16/11/2020	150.98 X 151.90 X 150.87	22934	8.492	524.8	22.9	
3	Plinth Beam Concrete	M20	19/10/2020	16/11/2020	149.95 X 151.25 X 149.16	22680	8.797	537.5	23.7	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

ID	:	CP-2021-01-06-14
ect Name	:	Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division
ncy	:	M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010
tomer's Reference	:	BBMP/EE/YNK.D/W.O/153/2019-20
te of Receipt	:	17-11-20
tomer ID	:	Lintel Concrete
mple Type /Size	:	150X150X150 mm
mple grade/Age	:	M20 / 7 Days Compressive Strength
ference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
te of test	:	20/11/2020

Date: 20/11/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Lintel Concrete	M20	13/11/2020	20/11/2020	150.44 X 151.47 X 149.97	22787	8.351	424.9	18.6	18.8
2	Lintel Concrete	M20	13/11/2020	20/11/2020	151.54 X 151.46 X 152.00	22953	8.427	435.8	19.0	
3	Lintel Concrete	M20	13/11/2020	20/11/2020	151.56 X 150.12 X 149.08	22753	8.258	425.5	18.7	

*The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

Lab ID : CP-2021-01-06-14

Date: 01/12/2020

Project Name : Improvements to Roads and Drains at Yelahanka Old Town SC/ST area and AD colony and surrounding areas in Ward No. 02 of Yelahanka Sub division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore: 560010

Customer's Reference : BBMP/EE/YNK.D/W.O/153/2019-20

Date of Receipt : 26-11-20

Customer ID : Roof Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 01/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Roof Concrete	M20	24/11/2020	01/12/2020	150.74 X 150.33 X 150.50	22661	8.351	424.8	18.7	18.8
2	Roof Concrete	M20	24/11/2020	01/12/2020	151.27 X 151.13 X 151.69	22862	8.427	425.5	18.6	
3	Roof Concrete	M20	24/11/2020	01/12/2020	149.14 X 151.33 X 150.25	22569	8.258	427.6	18.9	

* The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2021-01-06-14

Date: 16-10-20

PHYSICAL PROPERTIES

SLno	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.8	-
2	Specific Gravity	2.56	-
3	Material finer than 75 micron(%)	8.5	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

*The results obtained are satisfactory as per standard requirements.

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